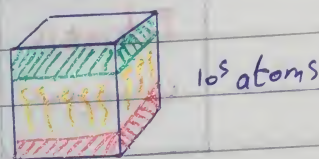
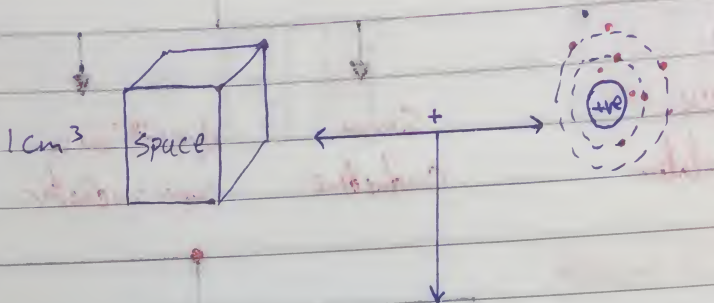


Electronics I

Dr. Mostafa Mohamed.

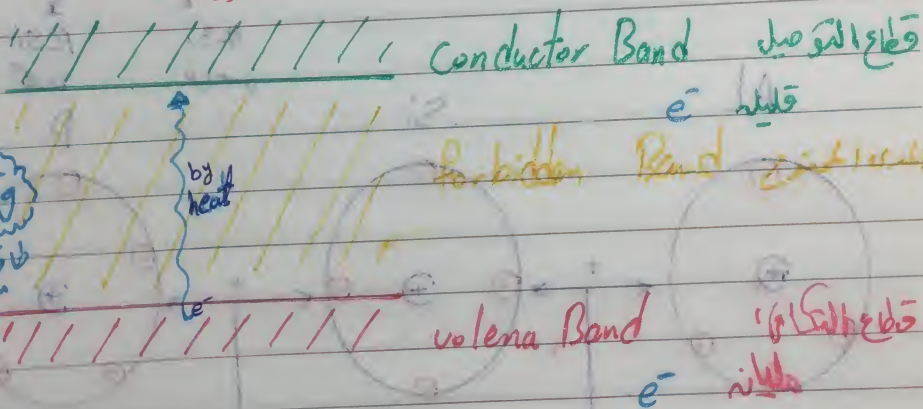
"Semiconductors"

لو كنا مكعباً بجاوه 1cm وحطينا فيه الالكترونات :



zoom

"Energy Diagram"

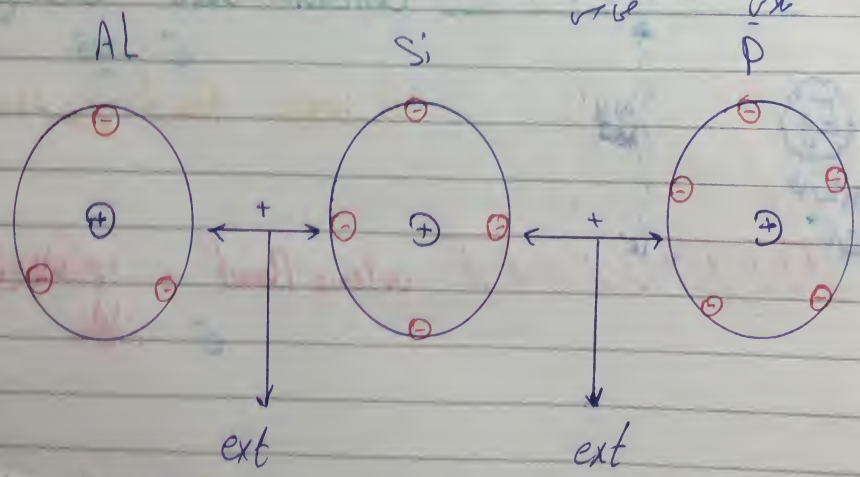
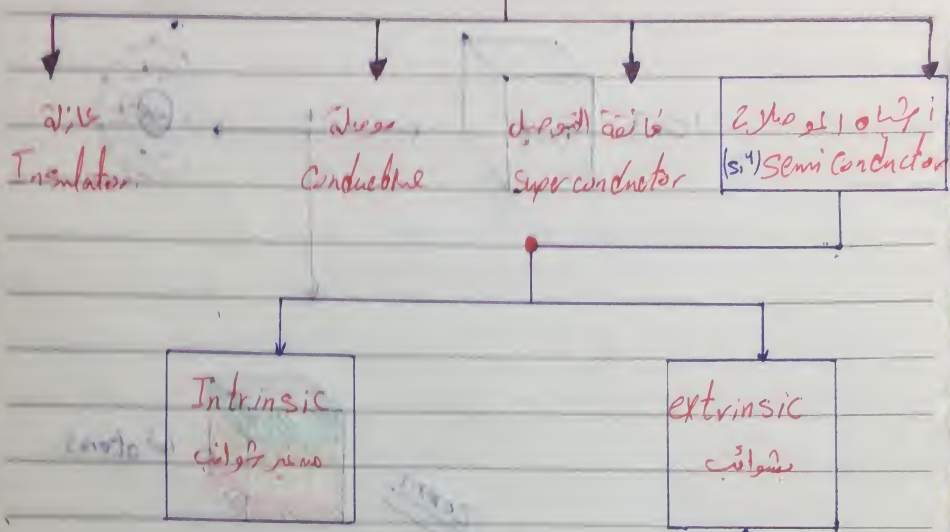


لو $E_g \uparrow$ ← "Energy gap" ← $E_g \downarrow$
 $E_g \downarrow$ ← $E_g \downarrow$ ← $E_g \downarrow$
 $E_g \downarrow$ ← $E_g \downarrow$ ← $E_g \downarrow$

علاقة عكسية بين

$$E_g \propto \frac{1}{T}$$

Materials

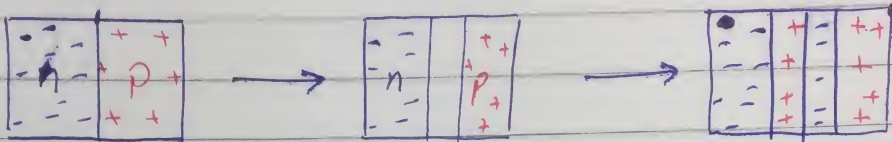


P-Silicon
P-type silicon
↓ التو صليبة

n-silicon
n-type silicon
↑ التو صليبة

* P-n Junction *

* Diode *



Diode